

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A pedal reaction force device for applying a prescribed reaction force to an operating pedal to be depressed by pedaling, comprising:

a reaction force generating unit for applying a pedaling reaction force to said operating pedal on the basis of displacement due to said operating pedal being mechanically displaced in accordance with a pedaling operation; and

a displacement characteristics regulating mechanism disposed between said reaction force generating unit and said operating pedal, which transmits said reaction force to said operating pedal, and simultaneously mechanically non-linearly sets a variation pattern of displacement magnitude of said reaction force generating unit with respect to a pedaling stroke of said operating pedal;

wherein said reaction force generating unit comprises comprising:

(i) a damper device for applying the pedaling reaction force to said operating pedal on the basis of circulation resistance of a fluid sealed in said damper device by being mechanically compressed or tensioned in accordance with the pedaling operation of said the operating pedal; and

(ii) a spring member for applying the pedaling reaction force to said operating pedal on the basis of resilient deformation by being mechanically and resiliently deformed in accordance with the pedaling operation of said operating pedal, and

~~wherein~~ the pedaling reaction force of the damper device ~~differs~~ differing according to the pedaling speed; and

the spring member being a coil spring substantially concentrically disposed radially outward of the damper device so as to surround the damper device and being compressed and tensioned integral with the damper device in accordance with the pedaling operation of the operating pedal.

2. (Currently Amended) A pedal reaction force device according to claim 1, wherein said displacement characteristics regulating mechanism intervenes between said damper device ~~and/or~~ and said spring member and said operating pedal.

3. (Currently Amended) The pedal reaction force device according to claim 2, wherein ~~said spring member is a coil spring that is substantially concentrically disposed at the outer circumferential side of said damper device so as to surround said damper device and is compressed and tensioned in an integrated manner with said damper device in accordance with the pedaling operation of said operating pedal, and a variation pattern of displacement magnitude of said spring member and said damper device is defined by a single displacement characteristics regulating mechanism.~~

4. (Previously Presented) The pedal reaction force device according to claim 3, wherein said operating pedal is turned around a substantially horizontal support shaft by the pedaling operation, said displacement characteristics regulating mechanism is a cam whose dimension from said support shaft is continuously varied and which is turned around said support shaft in an integrated manner with said operating pedal, and said reaction force generating unit is engaged with said cam and is displaced in accordance with the variation pattern corresponding to a profile of a cam surface.

5. (Withdrawn) The pedal reaction force device according to claim 3, wherein said operating pedal is turned around a substantially horizontal support shaft by a pedaling operation, and

said displacement characteristics regulating mechanism comprises

a rocking lever which is pivotally disposed around a rocking shaft parallel to said support shaft and is connected to said reaction force generating unit; and

an interlocking mechanism which is disposed over both said rocking lever and said operating pedal and mechanically displaces said reaction force generating unit in a prescribed variation pattern by rocking said rocking lever in response to the pedaling stroke of said operating pedal.

6. (Previously Presented) The pedal reaction force device according to claim 2, wherein said operating pedal is turned around a substantially horizontal support shaft by the pedaling operation, said displacement characteristics regulating mechanism is a cam whose dimension from said support shaft is continuously varied and which is turned around said support shaft in an integrated manner with said operating pedal, and said reaction force generating unit is engaged with said cam and is displaced in accordance with a variation pattern corresponding to a profile of a cam surface.

7. (Withdrawn) The pedal reaction force device according to claim 2, wherein said operating pedal is turned around a substantially horizontal support shaft by a pedaling operation, and

said displacement characteristics regulating mechanism comprises

a rocking lever which is pivotally disposed around a rocking shaft parallel to said support shaft and is connected to said reaction force generating unit; and

an interlocking mechanism which is disposed over both said rocking lever and said operating pedal and mechanically displaces said reaction force generating unit in a prescribed variation pattern by rocking said rocking lever in response to the pedaling stroke of said operating pedal.

8. (Previously Presented) The pedal reaction force device according to claim 1, wherein said operating pedal is turned around a substantially horizontal support shaft by the pedaling operation, said displacement characteristics regulating mechanism is a cam whose dimension from said support shaft is continuously varied and which is turned around said support shaft in an integrated manner with said operating pedal, and said reaction force generating unit is engaged with said cam and is displaced in accordance with a variation pattern corresponding to a profile of a cam surface.

9. (Withdrawn) The pedal reaction force device according to claim 1, wherein said operating pedal is turned around a substantially horizontal support shaft by a pedaling operation, and

said displacement characteristics regulating mechanism comprises

a rocking lever which is pivotally disposed around a rocking shaft parallel to said support shaft and is connected to said reaction force generating unit; and

an interlocking mechanism which is disposed over both said rocking lever and said operating pedal and mechanically displaces said reaction force generating unit in a prescribed variation pattern by rocking said rocking lever in response to the pedaling stroke of said operating pedal.

10. (Previously Presented) The pedal reaction force device according to claim 1, wherein the pedal reaction force device is applied to an electric pedal device.